



THE IMPACT OF INTERNAL CONTROL ON ELECTRONIC CASH

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Abstract

Electronic cash is characterized by its superior flexibility and great ability to complete commercial transactions with great ease and speed compared to the regular paper currency used. This research aims to study the impact of internal control in its dimensions (control environment, risk assessment, and control activities) on electronic cash in commercial banks in the Kingdom of Saudi Arabia. Through a cross-sectional survey design, data were collected from 307 employees of Saudi Arabia commercial banks and analyzed using partial least squares structural equation modeling (PLS-SEM) via Smart PLS software. The results revealed that control environment and risk assessment affect electronic cash, in contrast, control activities do not affect electronic cash.

Keywords: Control Environment, Risk Assessment, Control Activities, Electronic Cash and Kingdom of Saudi Arabia

INTRODUCTION

The notion of internal control has undergone a gradual and significant evolution in response to the quick and successive advancements in economic activity (Alisherovich & Ugli, 2023). The concept of internal control has evolved beyond its traditional role of safeguarding currency and now encompasses a collection of interconnected aspects and components established by senior management to facilitate the attainment of an economic unit's objectives. The emergence of this development in the realm of internal control can be attributed to various factors and circumstances. One notable factor is the continuous growth in the scale and objectives of economic entities. These entities have become increasingly intricate,

comprehensive, and detailed, thereby necessitating auditors to focus their efforts on specific aspects of the entity's operations due to the impracticality of reviewing every operation in detail Koutoupis and Malisiovas (2023).

Therefore, numerous proficient international organizations have implemented regulations that encompass significant guarantees about the establishment and assessment of efficient internal control systems within public corporations. The comprehensive internal control framework provided by the Committee of Sponsoring Organizations (COSO) in America is widely recognized as one of the most renowned models established by specialized agencies. The Canadian Controlled Manual (COCO) is published by the Canadian Institute of Certified Public Accountants (CICA), while the Internal Control Manual (Turnbull Guidance) is released by the Institute of Chartered Accountants in England (Arens et al., 2012; Carey, 2001).

Electronic cash has gained significant global popularity as an electronic payment method, with numerous banks offering this service and generating substantial profits. Moreover, a vast number of individuals engage with electronic money for purchasing goods, avail services, and withdrawing cash conveniently (Fung et al., 2014; Toyiyibi, 2019). The act of individuals possessing currency is considered legally permissible within the context of commerce, as Islamic Sharia does not prohibit the incorporation of novel financial systems, provided they do not conflict with its fundamental principles or undermine its objectives Nabella et al., (2023).

In today's digital age, electronic cash, often referred to as e-cash or digital currency, has emerged as a revolutionary form of currency that is reshaping the traditional financial landscape (Bordo & Levin, 2019). As electronic transactions become increasingly prevalent, ensuring the security and integrity of these transactions is of paramount importance. This is where internal control procedures play a crucial role. Internal control procedures encompass a range of measures and protocols designed to safeguard assets, ensure accurate financial reporting, and prevent fraudulent activities within an organization. When applied to electronic cash systems, these procedures can have a profound impact on the overall security, reliability, and effectiveness of digital currency transactions (Allam, 2020).

However, Cases of financial fraud that have occurred in recent years have highlighted the weakness of internal control systems in many banks, which has led to increased interest in internal auditing and internal control systems and their role in modern business organizations. Hence, the problem of the research is to assess the extent of the development of internal control in Saudi commercial banks based on the developments that occur in this field in the world in terms of following clear standards in the field of internal control and internal control. This affected their financial performance, the modernity of the Saudi banking sector, its important role in the economy of the Kingdom of Saudi Arabia, and its impact on all economic

activities. This study aims to identify the impact of internal control procedures on electronic cash in commercial banks in the Kingdom of Saudi Arabia.

LITERATURE REVIEW

Internal Control

Internal control is a structured and methodical procedure that involves the collection and impartial assessment of information pertaining to the assurance of economic activities and occurrences. The purpose of this process is to ascertain the extent to which the assurance aligns with defined standards, and afterwards communicate the findings to relevant stakeholders (Al Haryono Josup, 2014: 10).

Nusa and Hariadi (2015) said that in various circumstances, the internal audit department provides support to managers through a range of actions, including the monitoring of operations that are beyond the scope of management oversight. The primary responsibilities of top management include the identification and mitigation of risks, the validation of reports for senior management, the safeguarding of management in the technical domain, the facilitation of the decision-making process, the analysis of both historical and prospective data, and the provision of support to managers in terms of organizational planning, and in the process of organizing, directing, and controlling (Kibrit, 2023).

For this study, internal control was measured with three dimensions, namely: control environment, risk assessment, and control activities, as follow:

Control Environment

The first component of internal control, the control environment, is “the overall attitude, awareness, and actions of directors and managers regarding the internal control system and its importance to the entity. The control environment sets the tone of an organization and influences the control consciousness of people in the organization” (Chen et al., 2017, p. 129).

The control environment encompasses various aspects within an organization, including its cultural norms, ethical principles, management's beliefs and practices, structural framework, board and audit committee supervision, as well as human resource policies and procedures (Alhasan & Abou Haidar, (2023).

Control Activities

The second component, Control activities are systematically executed across all levels and functions inside an organization in order to facilitate the achievement of the entity's objectives. Control operations encompass a range of actions, including approvals,

authorizations, verifications, reconciliations, performance assessments, safeguarding of assets, and segregation of roles, among others. Control operations are frequently formulated and executed with the purpose of reducing the likelihood of errors, irregularities, inefficiencies, and asset misappropriations, hence leading to enhanced accounting quality. According to Healy and Palepu (2001), the implementation of high-quality accounting practices has the potential to mitigate information asymmetry and enhance investment efficiency. According to Zhong (2018), the implementation of high-quality accounting practices can contribute to the optimization of organizations' investments by means of improved monitoring or more effective contracting.

Risk Assessment

The risk assessment component of internal control aims to identify and analyze the pertinent risks, errors, threats, and fraud that impede organizations from attaining their objectives (Ndiaye et al., 2019). It is imperative for organizations to proactively identify and effectively manage both future and present risks across several levels, including the macro level, industry level, firm level, and project level. In addition, it is vital to evaluate the probability and extent of the potential hazards, alongside the expenses and advantages associated with the alternative courses of action. When utilized successfully, risk assessment can assist organizations in identifying potential hazards and minimizing risk to an acceptable degree. This can be achieved through external supervision and internal corporate governance. Consequently, the implementation of risk assessment can effectively limit the risks associated with investments in innovation and the potential failure of innovation projects. However, it should be noted that the use of strict risk assessment protocols in innovation projects may potentially discourage the pursuit of new endeavors. For instance, Barger et al. (2010) discovered that many indicators of risk propensity, such as research and development (R&D) investment, see a decrease.

Internal Control and Digitalization

The contemporary function of internal auditors exhibits notable distinctions from the traditional paradigm wherein internal auditing served as the governing entity within the organization. According to Megawati (2018), there is a current trend in which the responsibilities of internal auditors are being broadened to encompass a consulting role, with the aim of assisting the business in attaining its objectives. Regrettably, the existing body of research pertaining to the function of internal audit in zakat and other organizations remains limited, particularly in relation to the role of internal control and digitization (Megawati, 2018). According to the findings of Mulyo et al. (2023), it was determined that the effectiveness of employees and

the internal control system exert a notable influence on the caliber of financial reports and the process of digitization within the context of their study.

The significance of IT audit within the realm of internal auditing is underscored by the fact that zakat institutions are unable to circumvent the impact of technology on zakat administration (Naz'ania, 2015). In Malaysia, the collection of zakat is facilitated through the utilization of mobile applications, namely on smartphones, as well as online banking platforms. According to the International Internal Audit Standards Board (IIA, 2012), advancements in technology have the potential to alter the operational procedures of a business. The involvement of internal auditors with expertise in information technology is crucial for enhancing the audit quality within the firm. Furthermore, the significance of the transparency of internal auditors' knowledge is heightened due to their obligation to comprehend the operational procedures within the corporation. In order to facilitate the identification of organizational risks, particularly in the realm of technology, it is imperative for internal auditors to possess a comprehensive understanding of the subject matter (IIA, 2012).

Based on the research objectives and the theoretical background, the research hypotheses are specified as follows:

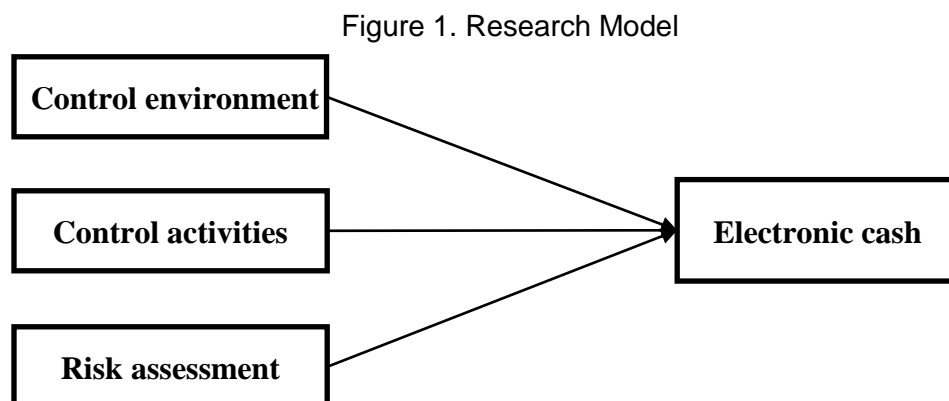
H1. There is a significant impact of the control environment on electronic cash in Saudi commercial banks.

H2. There is a significant impact of the control activities on electronic cash in Saudi commercial banks.

H3. There is a significant impact of risk assessment on electronic cash in Saudi commercial banks.

MODEL OF THE STUDY

The study model consists of the independent variable, the internal control system, with its dimensions, which represent the following (control environment, control activities, and risk assessment), and the dependent variable, which is electronic cash and has no dimensions.



METHODOLOGY

Sample

The hypothesized model was evaluated by applying a survey questionnaire research design. The survey form was delivered to employees with diverse job titles (general manager, financial manager, operations manager, information technology department manager, internal accountant, external accountant) in relation to their sectors, which the researcher considered most relevant to the subject of making decisions related to internal control procedures. In addition to the possibility of applying electronic cash in commercial banks. Due to the absence of a sampling frame, a convenient sampling method was applied. This method is frequently used by similar studies, such as, Hanaysha et al. (2022) and Al Swidi et al. (2021).

Demographic Profile

A total of 450 questionnaires were distributed to the participants via the electronic questionnaire, and because the participants were of Arab origin, the questionnaire was translated into Arabic (the target language) and then sent to two bilingual experts (English/Arabic) to ensure accuracy. Then another bilingual expert translated it from the final Arabic version into English (the source language) to remove inconsistencies. A total of 352 questionnaires were completed and returned, leaving 307 usable questionnaires with a guideline response rate of 68% after 45 invalid questionnaires were deleted. Table 1 shows the demographic characteristics of the sample.

Table 1. Demographic characteristics of the sample

Demographic information	Categories	Frequency	(%)
Gender	Male	266	86.6
	Female	41	13.4
Position	Internal accountant	119	38.7
	Financial Manager	43	14.0
	IT department manager	37	12.1
	Director general	31	10.1
	Director of Operations	35	11.4
	external accountant	42	13.7
Education level	Bachelor's degree	144	46.9
	Master's degree	122	39.7
	Ph.D. Degree	41	13.4

Measures

Based on an extensive review of pertinent scholarly literature, the questionnaire items were formulated. Moreover, in-depth interviews with managers from a sample of " 6 " banks

were conducted to ensure that all items of the questionnaire were clear. Whenever feasible, the researchers have modified preexisting items to align with the objectives of the study. This approach was adopted to guarantee the comprehensibility and applicability of all items within the specific business context of the Kingdom of Saudi Arabia. A survey instrument, consisting of a questionnaire tool and a five-point Likert scale ranging from 5 (Strongly agree) to 1 (Strongly disagree), was employed to evaluate the participants' responses and gather the requisite data to test the relationships in the proposed model. Overall, internal control was measured by 18 items that evaluate its three dimensions, which adopted from Njeri (2014); While electronic cash was measured 8 items adopted from Abdulmajid et al., (2023). Abdulmajid, H. M. A., (2023). The effect of internal control procedures on electronic cash in commercial banks in Yemen (Unpublished doctoral dissertation, DR. Babasaheb Ambedkar Marathwada University), India. Njeri, C. K. (2014). Effect of internal controls on the financial performance of manufacturing firms in Kenya. unpublished thesis, University of Nairobi.

Reliability and Validity

In order to ascertain the validity of the study's measurements, a reliability test was undertaken to assess the internal consistency among the items on the scale. As seen in Table 2, the Cronbach's alpha (α) values reported by Hair et al. (2011) were all greater than 0.70, demonstrating acceptable internal consistency. Similarly, the composite reliability (CR) values, as established by Fornell and Larcker (1981), above the threshold of 0.70, indicating satisfactory dependability. Furthermore, a confirmatory factor analysis (CFA) was conducted to assess the construct validity of the study, specifically examining convergent validity and discriminant validity. Bagozzi and Yi (1988) reported that all factor loading values exceeded the threshold of 0.60. Additionally, Hair et al. (2011) established a frequently accepted cut-off point of 0.50 for the average variance extracted (AVE), which was surpassed in this study. Overall, all constructs demonstrate adequate convergent validity. The descriptive statistics of the study variables are presented in Table 3. Moreover, the findings derived from the analysis of discrimination of latent factors indicate that the discriminant validity is substantial. This is evidenced by the fact that the square root values of the average variance extracted (AVE) exceed the corresponding correlations among all factors, as proposed by Fornell and Larcker (1981). This demonstrates that the indicators exhibit stronger correlations with their respective factors compared to other factors.

Conventionally, the internal consistency is evaluated by Cronbach's alpha (CA). However, within Smart PLS, internal consistency is measured using Composite Reliability (CR). Although both CA and CR measure the same thing (internal consistency), CR takes into

account that indicators have different loadings (Hair et al., 2017). The result in Table 2 shows that the CR value of each construct ranges from (0.866- 0.903) which fell within the recommended range. In regard to CA, the values range (from 0.806- 0.866), which are also considered a satisfactory level of internal consistency.

In addition to the above measures, the researcher calculated the discriminating validity, which refers to the extent of the distinction between a construct and other constructs. Hair et al. (2010) suggest associating the squared correlation estimates value with (AVE) values for any two constructs. Moreover, the AVE value should be higher than the squared correlation estimates.

Table 2. Convergent Validity

Construct items	Item	Item loadings	Average Variance Extracted AVE	Composite Reliability CR	Cronbach's alpha CA
		> 0.70	> 0.50	0.70-0.90	0.60-0.90
CE	CE1	0.682	0.534	0.873	0.825
	CE2	0.750			
	CE3	0.777			
	CE4	0.792			
	CE5	0.707			
	CE6	0.668			
CA	CA1	0.745	0.525	0.868	0.818
	CA2	0.792			
	CA3	0.763			
	CA4	0.719			
	CA5	0.690			
	CA6	0.627			
RA	RA1	0.739	0.565	0.891	0.806
	RA2	0.760			
	RA3	0.815			
	RA4	0.742			
	RA5	0.697			
	RA6	0.788			
EC	EC1	0.734	0.504	0.890	0.859
	EC2	0.747			
	EC3	0.704			
	EC4	0.722			
	EC5	0.705			
	EC6	0.704			
	EC7	0.690			
	EC8	0.671			

The descriptive statistics of the study variables are presented in Table 3. Moreover, the findings derived from the analysis of latent factors' discrimination indicate that the discriminant validity is substantial. This is evidenced by the higher values of the average variance extracted (AVE) in comparison to the corresponding correlations among all factors, as suggested by

Fornell and Larcker (1981). These results demonstrate that the indicators have stronger correlations with their respective factors than with other factors.

Table 3. Discriminant validity (HTMT)

Constructs	Mean	SD	RA	EC	CA	CE
RA	4.16	0.609				
EC	4.30	0.555	0.795			
CA	4.17	0.586	0.809	0.844		
CE	4.12	0.607	0.812	0.783	0.753	

RESULTS AND DISCUSSION

The results in Table 4 show that the analysis of all paths from the independent variables to the dependent variable was positive and significant, except for the path from control activities to electronic cash in commercial banks, which was positive but not so prominent. As for the independent factors, they explain 0.657 percent of the variation in the dependent variable, which is electronic cash in commercial banks, according to the value of the R2 coefficient of determination of 0.657, which is a significant explanation (Shin 1998). Based on the value of f2, it is clear that the proportion of contributions of all independent variables in the coefficient of determination was small, except for the control activities that had no effect on explaining the variance. The Q2 value was 0.323, which is higher than the standard limit, indicating that the predictive significance of the path model for the dependent potential is appropriate.

Table 4. Path coefficient

H	Causal relationships	Summary of the path coefficient estimates				F2	R2	Q2
		Coefficient path	T-statistical	P-values	Decision			
H1	CE -> EC	0.137	2.301	0.021	Accepted	0.022		
H2	CA -> EC	0.122	1.881	0.060	Rejected	0.017	0.657	0.323
H3	RA -> EC	0.242	4.096	0.000	Accepted	0.071		

CONCLUSION

The current study highlights the study of the impact of internal control on electronic money in Saudi commercial banks. The study community in commercial banks in the Kingdom of Saudi Arabia paid great attention to the control environment, indicating that the study community represented by commercial banks is interested in terms of behaviors, policies, and procedures that reflect the general direction of senior management towards any unit with regard to internal control by providing a good control environment and stimulating performance and that All roles, responsibilities, and actions of Commercial Bank employees are clear and understood.

Despite the contributions of this study, it suffers from some limitations, which in turn require more research in the future. First, this study only dealt with three dimensions of internal control to study the relationship between internal control and electronic money in Saudi commercial banks. Thus, future research should focus extensively on examining other variables that may affect the relationship between internal control and electronic money in Saudi commercial banks. Secondly, the scope of the sample was limited to commercial banks located in the Kingdom of Saudi Arabia, while future studies could focus on commercial banks and non-commercial banks and expand to other countries, thus creating a greater understanding of the relationship between internal control and electronic money.

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